

Claims

- 5 1. Communication network for a house, a flat or an office in a house or for separated blocks of buildings, so as to connect at least three terminal units within the house, the flat, the office or the separated blocks of buildings, comprising:

10 a central data bus for transmitting data to be transmitted between at least the said three terminal units;

15 a first network terminating device which is provided for a first terminal unit and which comprises interfaces for communication devices which may be disposed in the first terminal unit;

20 a first interface which is allocated to said first network terminating device and which is disposed between the central data bus and the first network terminating device and which is designed for controlling an access of the first network terminating device to the central data bus;

25 a second network terminating device, which is provided for a second terminal unit and which comprises interfaces for communication devices which may be disposed in the second terminal unit;

30 a second interface which is allocated to the second network terminating device and which is disposed between the data bus and the second network terminating device and which is designed for controlling an access of the second network terminating device to the central data bus;

35 a third network terminating device which is provided for a third terminal unit and which comprises interfaces for communication devices which may be disposed in the third terminal unit;

a third interface which is allocated to the third network terminating device and which is disposed between the central data bus and the third network terminating device and which is designed for controlling an access to the third network terminating device on the central data bus,

wherein the central data bus is a jointly utilised transmission path which may be accessed by the first, second or third network terminating device without considering other network terminating devices,

5 wherein said first, second and third interface are arranged for controlling said access to the first, second and third network terminating device on the central data bus such that guaranteed transmission parameters are guaranteed for a communication between the first, the second and the third network terminating device via the central data bus, and

10 wherein each network terminating device or each communication device connected to the network terminating device is formed so as to arrange, together with the interface which has been allocated to the same, transmission parameters for a transmission via the central data bus for achieving an adaptive service quality.

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2. Communication network according to claim 1, wherein the central data bus is an Ethernet network as per standard IEEE 802.3, a PLC network, an xDSL network, a broad-band cable network or a broad-band radio network.
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3. Communication network according to claim 1, wherein the interfaces of said first, second or third network terminating device comprise an interface selected from the following group: interface for a broad-band radio system for transmitting voice and/or data, an interface for an Ethernet system, an interface for an ISDN system, an interface for a POTS system, an interface for a sensor/actor system for a house control, an interface for a sensor/actor system for a house monitoring system, an interface for a PLC system, an interface for a system for door communication and an interface for an EIB system.
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- 30 4. Communication network according to claim 1, wherein said first network terminating device is formed as a central information and communication server and which further includes an interface for an external communication system so as to permit a voice and data communication connection between the communication devices connected to the network terminating devices and a subscriber of the external communication system.
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5. Communication network according to claim 4, wherein the interface for the external communication system is an ISDN interface, a broad-band xDSL inter-

face, an interface for a terrestrial broad-band radio system, a satellite radio system, an optical fibre cable, an external PLC network or a broad-band copper cable.

- 5 6. Communication network according to claim 1, wherein the data bus is embodied by a non-shielded twisted two-wire line, by a shielded twisted two-wire line, by an optical fibre cable or by a wireless connection.
- 10 7. Communication network according to claim 1, wherein at least one network terminating device is formed, so as to enable a communication between the communication devices connected to the interfaces of the same without transmitting data concerning this communication via the central data bus on a broad-band basis.
- 15 8. Communication network according to claim 1, wherein the bus further comprises:
  - a trunk section connected to the first network terminating device;
  - 20 a hub for each network terminating device with the hubs being located in the trunk section; and
  - a secondary section for each network terminating device, with each network terminating device being able to communicate with the first network terminating device via the secondary section provided for the same and the corresponding hub.
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- 30 9. Communication network according to claim 1, wherein the interfaces are formed to establish at least one parameter from the group of parameters, which comprises band-width reservation, delay time, periodic transmission, jitter and access control, as a transmission parameter for achieving an adaptive service quality.
- 35 10. Communication network according to claim 1, wherein said first and second and, third interface have been arranged so as to implement a centralised or decentralised selection procedure for controlling said access to the data bus.

11. Communication network according to claim 10, wherein the interface are located so as to implement a token-passing procedure or a master/slave procedure.
12. Communication network according to claim 1, wherein the central data bus with  
5 respect to its data transmission capacity is scalable on a required data capacity.

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